National Institute of Environmental Health Sciences

Susceptibility to heat wave-related mortality: A follow-up study of a cohort of elderly in Rome

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Abstract:

BACKGROUND: Few studies have identified specific factors that increase mortality during heat waves. This study investigated socio-demographic characteristics and pre-existing medical conditions as effect modifiers of the risk of dying during heat waves in a cohort of elderly residents in Rome. METHODS: A cohort of 651,195 residents aged 65 yrs or older was followed from 2005 to 2007. During summer, heat wave days were defined according to month-specific thresholds of maximum apparent temperature. The adjusted relative risk of dying during heat waves was estimated using a Poisson regression model including all the considered covariates. Risk differences were also calculated. All analyses were run separately for the 65-74 and 75+ age groups. RESULTS: In the 65-74 age group the risk of dying during heat waves was higher among unmarried subjects and those with a previous hospitalization for chronic pulmonary disease or psychiatric disorders. In the 75+ age group, women, and unmarried subjects were more susceptible to heat. Furthermore, a higher susceptibility to heat among those with previous hospitalization for diabetes, diseases of the central nervous system (CNS), psychiatric disorders and cerebrovascular diseases resulted from risk differences. DISCUSSION: Results showed a higher susceptibility to heat among those older than seventy-five years, females and unmarried. Pre-existing health conditions play a different role among the two considered age groups. Moreover, compared with previous studies the pattern of susceptibility factors have slightly changed over time. For the purposes of public health programmes, susceptibility should be considered as time, space and population specific.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2784450

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature, Other Exposure

Temperature: Extreme Heat

Other Exposure: apparent temperature

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Italy

Health Impact:

specification of health effect or disease related to climate change exposure

Cancer, Cardiovascular Effect, Morbidity/Mortality, Neurological Effect, Respiratory Effect, Urologic Effect

Cardiovascular Effect: Heart Attack, Other Cardiovascular Effect

Cardiovascular Disease (other): cardiovascular disease mortality;Cerebrovascular mortality

Respiratory Effect: Other Respiratory Effect

Respiratory Condition (other) : respiratory disease mortality

Population of Concern: A focus of content

Other Vulnerable Population: pre-existing medical condition; unmarried

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified